

## CLAIMS

- 1 1. A method for transforming multiple one-bit per pixel images for presentation  
2 on a device, comprising steps of:
  - 3 a) converting the one-bit per pixel images to multiple bits per pixel images;
  - 4 b) overlapping the multiple bits per pixel images, according to an overlap  
5 function, to create a composite multiple bits per pixel image;
  - 6 c) converting the composite multiple bits per pixel image into a dithered one-  
7 bit per pixel image by applying a spatial dithering algorithm; and
  - 8 d) presenting the dithered one-bit per pixel image on a display.
- 1 2. The method of claim 1, wherein step a) further comprises applying a first gray  
2 level to a first image and a second gray level to a second image wherein the gray  
3 levels are applied so as to create visual distinction between the images.
- 1 3. The method of claim 1, wherein step b) further comprises employing an  
2 overlap function from among the following: AVERAGE, MAX, ADD, and TOP.
- 1 4. The method of claim 1 wherein steps a), b), and c) are performed in virtual  
2 memory.
- 1 5. The method of claim 1, wherein step d) further comprises displaying the  
2 dithered one-bit per pixel image on a watch face.
- 1 6. The method of claim 1, wherein the device is a hand-held information  
2 processing system.

- 1 7. The method of claim 1, wherein the device is a one-bit per pixel computer  
2 monitor.
- 1 8. A method for transforming multiple one-bit per pixel images for presentation  
2 on a device, comprising steps of:  
3 a) applying different stipple patterns to each of the one-bit per pixel images to  
4 create multiple stippled images;  
5 b) overlaying the stippled images to create a composite stippled one-bit per  
6 pixel image; and  
7 c) presenting the composite stippled one-bit per pixel image on a display.
- 1 9. The method of claim 8 wherein step a) further comprises selecting stipple  
2 patterns so that when multiple stipple patterns overlap black dots from one stipple  
3 pattern do not coincide with the black dots from any other stipple pattern.
- 1 10. The method of claim 8, wherein the device is a hand-held information  
2 processing system.
- 1 11. The method of claim 8, wherein the device is a one-bit per pixel computer  
2 monitor.
- 1 12. The method of claim 8, wherein steps a) and b) are performed in virtual  
2 memory.

- 1 13. An apparatus for transforming multiple one-bit per pixel images for  
2 presentation on a device, comprising logic for performing steps of:  
3 a) converting the one-bit per pixel images to multiple bits per pixel images;  
4 b) overlapping the multiple bits per pixel images according to an overlap  
5 function to create a composite multiple bits per pixel image;  
6 c) converting the composite multiple bits per pixel image into a dithered one-  
7 bit per pixel image by applying a spatial dithering algorithm; and  
8 d) generating a signal representing the dithered one-bit per pixel image.
- 1 14. The apparatus of claim 13 wherein the logic comprises  
2 memory for storing instructions for performing the steps a), b), c) and d); and  
3 a processor for performing the instructions.
- 1 15. The apparatus of claim 13, wherein steps a), b), and c) are performed in virtual  
2 memory.
- 1 16. The apparatus of claim 13 further comprising  
2 a display for presenting the dithered one-bit per pixel image.
- 1 17. The apparatus of claim 13, further comprising a timekeeping apparatus  
2 wherein the one-bit per pixel image is displayed on a watch face.
- 1 18. The apparatus of claim 13, wherein the device is a hand-held information  
2 processing system.
- 1 19. The apparatus of claim 13, wherein the device is a one-bit per pixel computer  
2 monitor.

1 20. An apparatus for transforming multiple one-bit per pixel images for  
2 presentation on a device, comprising logic for performing the steps of:  
3 a) applying different stipple patterns to each of the one-bit per pixel images to  
4 create stippled images;  
5 b) overlaying the stippled images to create a composite stippled one-bit per  
6 pixel image; and  
7 c) generating a signal representing the composite stippled one-bit per pixel  
8 image.

1 21. The apparatus of claim 20, wherein the device is a hand-held information  
2 processing system.

1 22. The apparatus of claim 20, wherein the device is a one-bit per pixel computer  
2 monitor.

1 23. The apparatus of claim 20 wherein the logic for applying different stipple  
2 patterns to each of the one-bit per pixel images further comprises logic for selecting  
3 stipple patterns so that when multiple stipple patterns overlap black dots from one  
4 stipple pattern do not coincide with the black dots from any other stipple pattern.

1 24. The apparatus of claim 20, further comprising a timekeeping apparatus  
2 wherein the one-bit per pixel image is displayed on a watch face.

25. The apparatus of claim 20, wherein steps a) and b) are performed in virtual memory.